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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|--|-------------|----------------------|---|------------------|
| 10/644,064 | 08/20/2003 | Shingo Hane | 62758-053 | 4353 |
| <div>7590 05/10/2007 MCDERMOTT, WILL & EMERY 600 13th Street, N.W. Washington, DC 20005-3096</div> | | | <div>EXAMINER GELAGAY, SHEWAYE</div> <div>ART UNIT 2137</div> <div>MAIL DATE 05/10/2007</div> <div>PAPER NUMBER PAPER</div> | |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | | |
|------------------------------|------------------------|--|---------------------|--|
| Office Action Summary | Application No. | | Applicant(s) | |
| | 10/644,064 | | HANE ET AL. | |
| | Examiner | | Art Unit | |
| | Shewaye Gelagay | | 2137 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to Applicant's amendment filed on February 27, 2007. Claims 1-2, 6-7 have been amended. New claims 8-14 have been added. Claims 1-14 are pending.

Response to Arguments

2. Applicant's arguments February 27, 2007 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-9, 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (hereinafter Brown) US Patent 6,671,805 in view of Horita et al. (hereinafter Horita) US Patent 7,174,460.

As per claims 1 and 8:

Brown teaches an electronic document management system, comprising:

a data creation device for creating data by dividing an electronic document into two or more partial documents having an arbitrary or fixed length; (col. 8, lines 35-47; col. 15, lines 17-20)

a signature device for generating a plurality of items of information, each item of information being for verifying validity of a respective one of the partial documents; (col. 8, line 57-col. 9, lines 30; col. 13, line 41-col. 14, line 63)

a masking device for masking the electronic document on an individual partial document basis; (col. 12, lines 56-67; col. 13, lines 12-40) and

a verification device for verifying the validity of the masked electronic document. (col. 22, line 9-col. 23, line 45)

Brown does not explicitly disclose generating an aggregate of the generated items of information for verifying the validity of all the partial documents, and generating a digital signature to the aggregate of the generated items of information; and verifying the aggregate of the generated of information using the digital signature. Horita in analogous art, however, discloses generating an aggregate of the generated items of information for verifying the validity of all the partial documents, and generating a digital signature to the aggregate of the generated items of information; (figure 2; col. 4, lines 29-col. 5, line 6; col. 8, lines 29-46) and verifying the aggregate of the generated of information using the digital signature. (col. 4, lines 29-col. 5, line 6; col. 17, lines 42-59) Therefore, it would have been obvious to one ordinary skill in the art at the time the invention was made to modify the system disclosed by Brown with Horita in order to a distributed digital signature generation system which is safe and has good robustness

against security attacks and fault tolerance and to decrease the effect of the time complexity for verification. (col. 17, lines 40-51; Horita)

As per claims 2 and 9:

The combination of Brown and Horita teaches all the subject matter as discussed above. In addition, Brown further discloses wherein the verification device examines the validity of each of the partial documents of the masked electronic document by verifying the generated item of information for each partial document, and based on a result of the item verifying determines which of the partial documents has been partially deleted or modified. (col. 22, line 9-col. 23, line 45)

As per claims 4 and 11:

The combination of Brown and Horita teaches all the subject matter as discussed above. In addition, Brown further discloses wherein the data creation device divides the electronic document by adding a delimiter to the beginning and/or end of the partial documents. (col. 8, lines 35-47; col. 15, lines 17-20)

As per claims 5 and 12:

The combination of Brown and Horita teaches all the subject matter as discussed above. In addition, Brown further discloses wherein the electronic document is a document created with a markup language, wherein the partial documents are markup units for the document created with the markup language, and wherein the delimiter is a tag for the markup language. (col. 8, lines 35-47; col. 15, lines 17-20)

As per claims 6 and 13:

The combination of Brown and Horita teaches all the subject matter as discussed above. In addition, Brown further discloses wherein each item of the information for verifying the validity of a respective one of the partial documents is a hash value which is generated with a hash function for the respective one of partial documents. (col. 22, line 9-col. 23, line 45)

As per claims 7 and 14:

The combination of Brown and Horita teaches all the subject matter as discussed above. In addition, Brown further discloses wherein each item of information for verifying the validity of a respective one of the partial documents is a digital signature for the respective of the partial documents. (col. 22, line 9-col. 23, line 45)

5. Claims 3 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brown et al. (hereinafter Brown) US Patent 6,671,805 in view of Horita et al. (hereinafter Horita) US Patent 7,174,460 and further in view of Lee et al. (hereinafter Lee) US Publication 2003/0145197.

As per claim 3 and 10:

The combination of Brown and Horita teaches all the subject matter as discussed above. In addition, Brown further discloses an authorization failure that notifies a signer and/or the signer's employer, bank, or the like if a signature is not successfully verified. (col. 24, line 51-col. 25, line 4) Both references do not explicitly disclose wherein the verification device displays the result of the verification on a display unit for the purpose of notifying a verifier whether the electronic document is partially deleted or modified

while assuring the validity of the whole electronic document. Lee in analogous art, however discloses a verification device displays the result of the verification on a display unit for the purpose of notifying a verifier whether the electronic document is partially deleted or modified while assuring the validity of the whole electronic document. (page 8, paragraph 53) It would have been obvious to one ordinary skill in the art at the time the invention was made to modify the system disclosed by Brown and Horita with Lee in order to provide the verification result to the user by utilizing web documents.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shewaye Gelagay whose telephone number is 571-272-4219. The examiner can normally be reached on 8:00 am to 5:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on 571-272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Shewaye Gelagay



EMMANUEL L. MOISE
SUPERVISORY PATENT EXAMINER